

ABSTRACT OF DISCLOSURE

A delivery catheter having an inner catheter assembly, an inferior capsule catheter, and a capsule jacket assembly for use in deploying a graft having a compressible and expandable attachment systems in the thoracic region of an aorta. The graft is comprised of a tubular member having superior and inferior ends, each having an attachment system with wall engaging members secured thereto and is crimped along its midsection to resist kinking and elongation. The delivery catheter includes an inferior capsule assembly for releasably retaining the inferior attachment system of the graft and a superior capsule assembly for releasably retaining the superior attachment system of the graft as well as a releasing system for maintaining the attachment systems in a compressed configuration and for facilitating expansion of the attachment systems. The delivery catheter also includes an anti-elongation wire attached to the inner catheter assembly to prevent stretching of the delivery catheter during deployment of the graft within the aorta. Upon removing the attachment systems from the capsule, the releasing system functions to allow the attachment systems to assume their expanded configuration and engage the walls of the aorta. The graft and attachment systems remain in the vessel after the delivery catheter is withdrawn.